

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in France on 29 July 2002. It is noted, however, that applicant has not filed a certified copy of the FR-02/09605 application as required by 35 U.S.C. 119(b).

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **33a**, **33b** (see Figure 3). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing

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sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Galantai (International Patent Publication No. WO 01/28406, already of record).

Regarding claim 1, Galantai teaches a process for producing a channel cleaning brush for cleaning an endoscope channel ("method of manufacturing endoscope cleaning apparatus"; see Page 4, Lines 24-25) comprising mounting on a flexible core ("string like member"; see Page 4, Line 5) at least one synthetic material brush ("an injection moulded form ... being of a second plastics material ... and being such as to provide a smoothing and/or cleaning effect"; see Page 3, Line 25-28) comprising a cleaning coil disposed on a shaft (see Figure 2, wherein item **2** is a cleaning coil with a shaft section

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between two ridged cleaning sections), wherein the synthetic material brush is over-moulded onto the flexible core ("said second plastics material has been injection moulded onto said first plastics material of said elongate member"; see Page 3, Lines 30-31) and wherein the process is characterized by over-moulding a plurality of synthetic material brushes onto the flexible core ("injection moulding a thermoplastic pull through profile about at least one axial zone of said filament"; see Page 3, Lines 15-16).

Regarding claim 2, Galantai teaches a process wherein the flexible core is pre-cut between two of the synthetic material brushes (see the process diagram between the title and abstract at the bottom of the cover page, wherein "optional cutting of monofilament" is disclosed; said cutting would of necessity take place between the molded brushes).

Regarding claim 5, Galantai teaches a process wherein the over-moulding comprises fusion diecast moulding ("injection molding"; see Page 3, Line 16; injection molding can be reasonably interpreted as reading on die cast molding in that, in the injection molding process, molten material is fused into a solid, a die (mold) is employed, and molten material is cast in said die).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Galantai. Galantai teaches a process wherein the pre-mounted flexible core having no mounted synthetic material brushes is unwound from a supply spool ("coil or spool feeding of a monofilament filament"; see Page 3, Line 13). While Galantai does not explicitly teach a process wherein the filament with molded brushes is wound onto a receiving spool, he does teach that cutting of the filament after molding of the brushes is optional (see the process diagram between the title and abstract at the bottom of the cover page, wherein "optional cutting of monofilament" is disclosed). It would have been obvious to one of ordinary skill in the art at the time of the invention that, when such cutting is not performed, the resulting product would be collected on a receiving spool similar to the supply spool (as in a common "reel to reel" system) for the benefit of conveniently collecting the finished product.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galantai as applied to claim 1 above, and further in view of Chodorow (U.S. Patent No. 5,086,792). Galantai teaches a process wherein the flexible core is cut between two of the synthetic material brushes and the strands of the core are separated (see the process diagram between the title and abstract at the bottom of the cover page, wherein "optional cutting of monofilament" is disclosed; said cutting would of necessity take place between the molded brushes). Galantai does not teach a process wherein a connector comprising a breaking point is over-molded onto the separated strands of the core. In analogous art, specifically over-molding onto filaments, Chodorow teaches a method wherein such connector is over-molded onto filaments for the purpose of

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creating convenient dispenser packages of the finished devices ("gripping elements **18** are secured to the floss strands ... each gripping element is formed with a score line or otherwise weakened area indicated by line **20**"; see Column 4, Lines 38-42 and Figure 1). It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the process taught by Galantai with the breakable connector taught by Chodorow for the benefit of providing a convenient package of dispensable brushes.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Galantai as applied to claims 1 and 5 above, and further in view of Rosato (Rosato, D.V., D.V. Rosato, and M.G. Rosato, *Injection Molding Handbook*, 3rd Edition, Kluwer Academic Publishers, 2000, Pages 226-234). Galantai does not teach the use of a modular mold in his process. However, the use of modular molds is very well known in the art, as documented by Rosato ("Many molds have been reengineered as standardized products that can be used with different cavities, runner systems, cooling lines, unscrewing mechanisms, etc."; see Page 226, Paragraph 3 under "Mold Descriptions"). It would have been obvious to one of ordinary skill in the art at the time of the invention to have used a modular mold in the process taught by Galantai for the benefit of increased flexibility in the operation of the molding process.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM P. BELL whose telephone number is

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(571)270-7067. The examiner can normally be reached on Monday - Thursday, 7:30 am - 5:00 pm; Alternating Fridays, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Ortiz can be reached on 571-272-1206. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wpb

/Angela Ortiz/

Supervisory Patent Examiner, Art Unit 4151